**Some attributes related to challenge problems:**

* Challenge -> ComplexType

1. Challenge Name -> string
2. Area -> string
3. Rules to solve the challenge -> ComplexType
4. Rule with unbounded occurrences
5. Description of the challenge -> string
6. Specific requirements ->ComplexType
7. Requirement with unbounded occurrences // For the time being
8. Supported documents -> complexType ->wouldn’t it be same as link? Even if it is a discussion/tutorial/file?
9. Links -> complexType
10. Link with unbounded occurences
11. Tutorials //same thing as link
12. Discussions
13. Files
14. Year -> xs:Date
15. Assessment string
16. Participants ->ComplexType -> This just indicates the areas which allowed to participate in the challenge and not the participating persons’ names
17. Industry Researchers -> string with minoccur =0
18. Academia -> string with minoccur =0
19. Benchmarks ->ComplexType
20. Categories ->ComplexType
21. Application ->Choice between three : all string
22. Random challenge
23. Crafted
24. Selection of benchmark problems ->string //For the time being. Picked form previous challenges. So right now not sure what exactly it would contain. That’s why kept it as a string.
25. Formats in which benchmark must be solved -> ComplexType
26. Format string with unbounded occurance
27. Timeline to solve benchmarks -> xs:integer
28. Solution
29. Format of the solution -> complexType -> <type> <link>
30. Source Code (Choice between) (inside type provide restriction)
31. Binary (type string -? not sure )
32. Formal Specification
33. Solution Description
34. Actual Description -> string
35. Format Required -> string
36. Input / Output Format Requirements -> ComplexType
37. Input -> ComplexType
38. InputReq with unbounded occurrences (string)
39. OutpuReq -> ComplexType
40. OutputReq with unbounded occurrences
41. Execution Environment -> ComplexType
42. Libraries ->ComplexType
43. Library - string with unbounded occurrences
44. Compilers -> Same as libraries
45. Processors -> ComplexType
46. Processor - >ComplexType with unbounded occurrences
47. Memory -> string
48. Name -> string
49. OS -> CompleType - Inside choice
50. Linux -> Choice and types of linux
51. MAC -> choice and types
52. Windows -> Choice and types
53. Deadline xs: Date
54. Allowed tools to solve the challenge (e.g. EDACC Verifier, MiniSAT 2.2.0, Edit Distance tool etc.) Complextype
55. Tool -> string
56. No. of Submissions allowed -> Integer

* Some Links I used:

1. SAT Challenge -
2. <http://baldur.iti.kit.edu/SAT-Challenge-2012/rules.html>
3. <http://baldur.iti.kit.edu/SAT-Challenge-2012/submission.html>
4. <http://baldur.iti.kit.edu/SAT-Challenge-2012/index.html>
5. Pacemaker Challenge - <http://sqrl.mcmaster.ca/pacemaker.htm>
6. VSTTE:
7. <https://sites.google.com/site/vstte2012/compet>
8. <http://www.macs.hw.ac.uk/vstte10/Competition.html>
9. SMT-COMP 2012
10. <http://smtcomp.sourceforge.net/2012/>
11. For benchmarks <http://smtcomp.sourceforge.net/2012/application.shtml>

* Not all challenges have benchmarks. SAT challenge and SMT-COMP have benchmarks. However, I am not exactly clear about the benchmark idea. SAT challenge requires participants to solve benchmarks in 15 minutes. These benchmarks are problems from previous SAT competitions. SMT doesn’t mention anything related to solving benchmarks and their significance. It just specifies the problems and format of the result. Can you please guide me with this?